

Post - Gastric Bypass Reflux: It Does Exist

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Background

There is a strong association between GERD and morbid obesity, with up to 70% of bariatric patients suffering to some extent from GERD symptoms. Laparoscopic Roux-en-Y gastric bypass is considered the gold standard procedure for obese patients with GERD. The physiologic effects of the bypass that account for the reduction in acid and reflux symptoms include weight loss and its associated reduction in intra-abdominal pressure, reduction in parietal cell mass in the gastric pouch, and diversion of biliopancreatic juices via the Roux-en-Y configuration. The RYGB results in improvement in most GERD symptoms as well as a reduction in anti-reflux medication use. That being said, there are still up to 22% of post-RYGB patients who develop new or worsening GERD symptoms. Data regarding the contributing factors to GERD after RYGB is scarce in the literature. The aim of this study is to identify patterns in patients presenting with de novo or worsening GERD after RYGB. In understanding the causes, we can then develop a standardized work up and treatment algorithm for each patient.

Methods

We performed a retrospective, single academic institution review of GERD after Roux-en-Y gastric bypass patients from 2013 to 2019, who required re-operation to manage symptoms. The review identified both newly diagnosed GERD patients as well as surgery-refractory GERD patients following gastric bypass. Patients were evaluated for GERD based on a combination of clinical questionnaires, upper endoscopies, esophagrams, pH studies, and manometry. The patients who underwent re-operation were more likely to undergo testing, and therefore were included in the review.

Results & Tables

Eight representative patients were identified with post-gastric bypass GERD, who also required re-operation for their symptoms. The most common symptoms were reflux and heartburn, and less commonly dysphagia. Average BMI at time of re-operation was 32.9. Six of the patients had new-onset GERD, and two patients had pre-existing GERD that worsened post-bypass. All patients underwent upper endoscopy as well as esophagram; and all patients had an element of hiatal hernia, with an average size of 2.6 cm. Seven of the eight patients underwent manometry, with a mean LES pressure of 16.6 mmHg and LES length of 3 cm. Two of the patients had an LESP less than 10 mmHg. These two patients underwent magnetic sphincter augmentation with the LINX device. The remaining six patients underwent laparoscopic hiatal hernia repairs. Four patients had pH testing with a mean DeMeester Score of 17.8. One of the patients had normal pH testing, but on impedance testing had a large component of non-acid reflux. Six of the eight patients had symptomatic improvement following re-operation. All the patients in our study had evidence of hiatal hernia, most commonly identified radiographically with esophagrams. This was especially true of all the smaller sliding type I hiatal hernias. Larger hernias over 1 cm in size were also frequently noticeable on upper endoscopy and correlated with a Hill grade of III or IV.

Patient	BMI	Hiatal Hernia Size (cm)	Esophagitis Grade	LESP (mmHg)	LES Length (cm)	DeMeester Score
A	41	1	A	1.3	2.8	2
B	38	1	A	5	4.6	16.1
C	46	3	-	-	-	-
D	28	3	C	14	3.6	30.8
E	30	2	-	19	1.4	-
F	26	2	A	23	5.2	22.1
G	30	5	-	10	2	-
H	24.5	4	A	44	1.7	-
Average	32.9	2.6		16.6	3.0	17.75

Conclusions

- Anatomic factors such as hiatal hernias and weakened lower esophageal sphincter muscles, as well as patient factors such as poor eating habits and weight regain contribute to post-gastric bypass GERD.
- A thorough work up starting with upper endoscopy and esophagram is essential to identify the presence of hiatal hernias. Esophageal manometry aids in recognizing weak lower esophageal sphincter muscle, while impedance and pH testing can identify weak acid and non-acid reflux
- Fixing even small sliding hiatal hernias had a positive effect on patients’ symptoms. The addition of a lower esophageal sphincter augmentation procedure further aided in resolution of symptoms in patients with a weakened sphincter muscle.

References

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